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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,137	02/26/2004	Pil-Sik Hyun	253/053	3498
27849	7590	03/13/2007		
LEE & MORSE, P.C. 3141 FAIRVIEW PARK DRIVE SUITE 500 FALLS CHURCH, VA 22042			EXAMINER LEE, HWA S	
			ART UNIT	PAPER NUMBER
			2886	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/13/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

*Supplemental*  
**Office Action Summary**

Application No.

10/786,137

Applicant(s)

HYUN ET AL.

Examiner

Andrew Hwa S. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 November 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4,6-11,13-16 and 18-38 is/are pending in the application.
- 4a) Of the above claim(s) 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-8,11,12,14-16 and 18-38 is/are rejected.
- 7) ☐ Claim(s) 9 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Remarks***

This supplemental Final Office Action replaces the Final Office Action of 2/16/07.

### ***Claim Rejections - 35 USC § 112***

1. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 13 is dependent on cancelled claim 12 and for examination purposes claim 13 will be assumed to be cancelled also.

### ***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-4, 6-8, 25-28, and 33-35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Merely classifying, identifying, determining, devising, evaluating etc. is not sufficient to constitute a tangible result, since the outcome of the method steps has not been used in a disclosed practical application nor made available in such a manner that its usefulness in a disclosed practical application is realized. See OG Notices: 22 November 2005, "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility".

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Please note:

Part b. Practical Application the Produces a Useful, Concrete, and Tangible Result under Section IV Determine Whether the Claimed Invention Complies with the Subject Matter Eligibility Requirement of 35 U.S.C. Sec. 101, sentence 3, in the OG Notice from 22 November 2005 states 'In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but rather that the final result achieved by the claimed invention is "useful, tangible, and concrete."'

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-4, 6-8, 11, 12, 14-16, and 18-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meeks et al (US 6,897,957).

Meeks shows a material independent optical profilometer comprising:

irradiating first and second lights having different wavelengths (e.g. 1601, 1603) onto the object to create an inspection spot on the object;

collecting scattered lights (e.g. 805, 2204, 1602, 1604) generated by the irradiated lights scattering from the inspection spot;

converting the collected scattered light into signals (photodetectors which convert light into electrical signals for analysis by a computer, e.g. column 7 lines 1+)

Meeks does not expressly state that the defects are classified, but Meeks does show that the goal of the invention is to improve upon the prior art and Meeks discloses that the prior art classified defects (column 1, line 32 to column 2, line 20) of the object by type of defect by analyzing the scattered lights and Meeks teaches that his apparatus measures defects (Abstract).

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Therefore, it is clear that the apparatus of Meeks inherently classifies the defect since Meeks states the importance of classifying defects stating, "It is important to be able to detect and classify these defects..." (column 1, line 32+). Further Meeks states, "Using the designs in FIGS. 8, 9, 10 and 12 will allow the measurement of submicron scratches, particles, stains, pits, mounds, handling damage, wear of the carbon layer, outside diameter damage and contamination."

With regards to claims 2-4, 11, 20-22, 28, 32, and 35, please see for instance the polarizers (e.g. 2902, 2903, etc).

With regards to claim 6, see for instance figure 22.

With regards to claims 7, 8, 34, 36, and 37, see for instance figure 29. One of ordinary skill in the art would recognize that the figures shown by Meeks are only schematic or simplified drawings so the skilled artisan would know that other optical elements may not be shown. Also well known is the use of additional mirrors in order to direct light in the desired location or to circumvent around objects. See for example Figure 10 of US 6,411,377.

With regards to claims 14, 15, 23, 24, 26, 27, 30, 31, Meeks teaches the angle can be anywhere between 0 and 90 degrees.

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With regards to claims 16 and 18, Official Notice is given that having a library or lookup table to compare the measured characteristic (scattered light) to previously known (sample) values is well known.

***Allowable Subject Matter***

6. Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to show or suggest the method for identifying types of defects of an object having all the steps as presently claimed including the step of providing a light path changing member wherein said first, second, third, and fourth mirrors form four points, respectively, of a rectangular path for the second light.

***Response to Arguments***

8. Applicant's arguments filed 11/21/06 have been fully considered but they are not persuasive.

9. With regards to the rejection under 35 U.S.C. 101, the claims are directed to a judicial exception, an abstract idea; as such, pursuant to the Interim Guidelines on Patent Eligible Subject Matter (MPEP 2106), the claims must have either physical transformation and/or a useful, concrete and tangible result. The claims fail to include transformation from one physical state to another. Although, the claims appear useful and concrete, a tangible result is not claimed.

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Merely identifying is not sufficient to constitute a tangible result, since the outcome of the identifying step has not been used in a disclosed practical application nor made available in such a manner (e.g. displayed or stored on a computer readable medium) that its usefulness in a disclosed practical application can be realized. As such, the subject matter of the claims is not patent eligible.

10. Applicant's arguments with respect to the rejection under 35 U.S.C. 103(a) in view of Leslie have been considered but are moot in view of the new ground(s) of rejection.

11. With regards to the claimed capability to perform a function within a certain time period, it has been held that a recitation that an element is "capable of" performing a function is not a positive limitation and thus does not constitute a limitation in any patentable sense. Furthermore, the apparatus is capable of performing the function within 3 minutes if the sample is very small, with very few, if any, defects to classify, and a very fast computer processor is used.

### *Conclusion*

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Hwa S. Lee whose telephone number is 571-272-2419. The examiner can normally be reached on Tue-Fr.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley Jr. can be reached on 571-272-2800 ext 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Andrew Hwa Lee  
Primary Examiner  
Art Unit 2877